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(54) Title: METHODS FOR PRODUCING BLOOD PRODUCTS FROM PLURIPOTENT CELLS IN CELL CULTURE

(57) Abstract: The present invention provides methods for in vitro production of clinically useful quantities of differentiated human blood cells. In various embodiments of the present invention, immortal pluripotent cells are used to produce differentiated blood cell populations using a cell production device. In a specific embodiment, the device is a sequential series of bioreactors utilizing growth media containing specific combinations of maintenance-, proliferation- or differentiation-promoting factors that maintain, expand and promote the maturation and differentiation of the desired cell types. The immortal pluripotent cells can optionally be genetically modified so as to remove histocompatibility or blood group antigens.

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